



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,456	03/10/2004	James Frederick Lau	2003P13760US	4456

7590 06/16/2005

Siemens Corporation
Intellectual Property Department
170 Wood Avenue South
Iselin, NJ 08830

EXAMINER

LE, HOA T

ART UNIT	PAPER NUMBER
----------	--------------

1773

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/797,456

Applicant(s)

LAU et al

Examiner

H. T. Le

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date March '04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

1. This application includes the terminology “resin” which is so different from that which is generally accepted in the art to which this invention pertains. At page 7, paragraph 32, it is stated that “resin is C-black”. Carbon black is not a resin. Applicant is required to provide a clarification of these matters or correlation with art-accepted terminology so that a proper comparison with the prior art can be made. Applicant should be careful not to introduce any new matter into the disclosure (i.e., matter which is not supported by the disclosure as originally filed).

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contain subject matter which were not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

(a) The specification describes a conductive resin according to the invention include “resins with conductive particles” (page 6, paragraph 0025). Yet, it is also stated that the conductive resin is carbon black (page 7, par. 32). Carbon black is a conductive powder but not a resin. Thus, it is unclear from the specification what a conductive resin constitutes.

(b) It is unclear from the specification what test is used to measure the “semiconductive property” of the semiconductive wedge. Electrical conductivity or resistivity exhibits different values in different media.

(c) The specification fails to teach one skilled in the art how to achieve a semiconductive sheet having the tensile modulus as claimed. Tensile modulus of a film/layer/sheet depends on a number of factors, such as the resin used, the curing/polymerizing temperature, the orientation, etc... The specification is totally silent as to what should be done so that the resulting semiconductive sheet with the specific tensile modulus as claimed can be achieved.

3. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In all claims, it is unclear what is meant by “sheet wedges”. A sheet has a different shape than a wedge. How can it be both?

In claim 1, the term “thin” renders the claims indefinite because “thin” is a relative term, but there is no basis to ascertain what degree of thickness of the sheet (or wedge) is considered “thin”. Note that however that the term “thin” in claim 2 is acceptable because there provides a numerical range for the thickness.

In claim 1, it is unclear what semiconductive property is. Is it electrical conductivity or electrical resistivity?

Other claims are further deemed indefinite in view of their dependency upon claim 1.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 4-7, 9-12 and 14-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Quirk (US 4,091,139).

Claim 1: Quirk teaches a semiconductive binding tape comprising mica flakes, resin, and conductive fillers. See col. 1, lines 40-60; col. 2, lines 39-41; and col. 6, lines 23-26. As defined in the specification at page 6, paragraph 25, resin and conductive particles makes conductive resin. Therefore, the semiconductive binding tape taught by Quirk comprises mica flakes and conductive resin. The binding tape is said to have a resistance value of 15,000 ohms/sq. (col. 2, lines 3-4) and if activated carbon black is used as the conductive particles, its resistivity value increases to 50,000 (in air) up to 317,000 ohm/sq (in epoxy-styrene bath).

Claim 4: See col. 1, lines 47-50.

Claim 5: See col. 6, lines 23-26.

Claim 6: The tensile modulus as claimed is deemed met by inherency as the semiconductive tape taught by Quirk contains the same materials as that of the claimed semiconductive wedge.

Claims 7 and 9: See col. 2, lines 39-41 and col. 3, lines 27-29.

Claims 10-11: See col. 2, lines 39-42.

Claims 12 and 14-19: See rejections to claims 1-11 above.

Claim 20: See col. 2, lines 35-64; col. 4, lines 3-19 and examples.

6. Claim 20 is rejected under 35 U.S.C. 102(b) as being anticipated by Zeise (US 4,606,785).

See claim 1, and col. 2, lines 29-32.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2, 3, 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Quirk (US 4,091,139) as applied to claims 1, 4-7, 9-12 and 14-16 above, and further in view of the discussion below.

Claim 2: Quirk discloses the claimed invention as discussed above, but does not explicitly report the thickness of the semiconductive tape. However, it would have been obvious to one having ordinary skill in the art to arrive at the thickness as claimed through routine experimentation or depending on the desired conductive effects.

Claim 3: quirk does not suggest specific type of mica flakes. However, it would have been obvious to select any of the commercially available mica flakes as all mica flakes are functionally equivalent as a matrix in a semiconductive tape.

Claims 8 and 13: It would have been obvious to one having ordinary skill in the art to arrive at the proportions between mica and glass fiber as claimed through routine experimentation or depending on the desired conductive effects.

9. References not relied upon are cited as art of interest.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to H. T. Le whose telephone number is 571-272-1511. The examiner can normally be reached on 10:00 a.m. to 6:30 p.m., Mondays to Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



H. T. Le
Primary Examiner
Art Unit 1773